# WBC for Long Distance Ore and Tailings Slurry Transport





## **Rock Solid Solutions** for Severe Slurries

The WBC pump's patented design incorporates the latest hydraulic and wear technologies for heavy duty, high pressure applications. Its primary service is in ore transport lines that are subject to sudden pressure spikes.

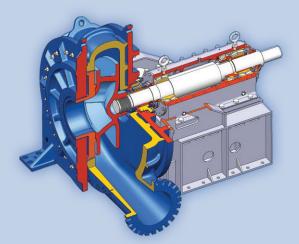
The pump shell is designed to virtually eliminate bending moments and stresses that cause a structural failure during a pressure surge. Non-wearing, ribbed suction and hub plates assist in containing surges, commonly referred to as water hammer. Design is augmented by the use of rugged GIW Gasite® alloys for superior abrasion resistance.

WBC Slurry Pumps are well suited for severe duties with operating flows up to 70,000 gpm (16,000 m<sup>3</sup>/h). The design is based on the proven GIW LSA Slurry Pump.

WBC pumps may be required when customer specifications exceed the LSA limitations.



### **GIW WBC** Design Features:



#### **WEAR PARTS**

Impeller: Impeller designed for larger sphere passage.

- **Replaceable Suction Liner:** Facilitates pump internal inspection and minimizes wear part usage costs. Liner can be rotated at intervals to increase wear life.
- Pump Shell: Computer designed to optimize wear and efficiency and contain sudden pressure surges.

### EFFICIENCY

Lower Specific Speed Design: Large diameter impeller allows the pump to run slower for better parts wear life. A lower specific speed also gives the pump the ability to operate over a wide range of flows to meet today's varying flow conditions.

Superior Suction Performance: Designed for excellent Net Positive Suction Head Required (NPSHR) capabilities.

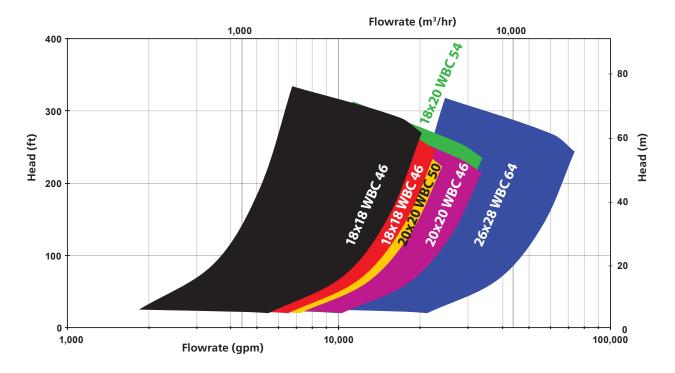
### **MAINTENANCE FRIENDLY**

Impeller Release Ring: Provides for easy impeller removal and is standard on all WBC pumps. The three piece segmented ring is mounted between shaft sleeve and shaft shoulder. Drastically reduces time for wet end change outs for less down time.

### **MECHANICAL END**

Robust stiffened shaft improves wear life of mechanical end. Split-cartridge bearing assembly with Labyrinth seals to protect shaft and bearings. Heavy duty radial bearings are self-aligning. Limited end float design greatly reduces shaft movement.

### **WBC Offers** Wide Selection Range



## Tried and True Success: Florida Phosphate Industry

- The GIW WBC is heavily used in the Florida Phosphate industry for transport of phosphate ore slurry.
- GIW pumps are the product of choice for major phosphate companies because of their reliability and cost effectiveness.



### **Applications:**

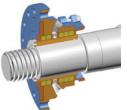
- Phosphate
- Tailings
- Ore slurries
- Hydraulic transport
- Pipeline booster stations

#### Size Range:

- Discharge diameters: 18 in to 26 in (457 mm to 660 mm)
- Flows to 70,000 gpm (16,000 m<sup>3</sup>/h)
- Total head: up to 260 ft (80 m)
- Power rating to 8,000 hp (5960 kW)

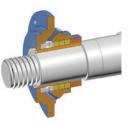
## **WBC** Shaft Seals





Throat Bushing

Minimum Dilution



Spiral Trac™

## Low Flow Stuffing Box Options

- Match customer needs
- Reduce flow up to 95%
- Maximize water control
- Restrict seal water flow into pump
- Pressure or flow controlled
- Minimize flush water spray
- Improve reliability

## **WBC** Pump Range Information Table

| Assembly<br>Number | Nominal Size |              | Maximum<br>Operating<br>Pressure |     | Free Passage |         | Discharge<br>Position | Vane<br>Number<br>& Type | Nominal<br>IMP<br>Diameter |
|--------------------|--------------|--------------|----------------------------------|-----|--------------|---------|-----------------------|--------------------------|----------------------------|
|                    | in           | mm           | psi                              | bar | in           | mm      | degrees               |                          |                            |
| 9600D              | 18x18-46     | 450x450-1170 | 400                              | 28  | 4.9x6.3      | 124x161 | 4 ME                  | 43.75                    | 43.75                      |
| 9596D              | 18x18-46     | 450x450-1170 | 400                              | 28  | 8.0x8.8      | 203x223 | 3 ME                  | 46                       | 46.00                      |
| 9655D              | 18x20-54     | 450x500-1272 | 282                              | 19  | 6.8x8.0      | 171x203 | 5ME                   | 54                       | 46.00                      |
| 9623D              | 18x20-54     | 450x500-1272 | 282                              | 19  | 8.0x9.8      | 203x248 | 3 ME                  | 54                       | 54.00                      |
| 9515D              | 18x20-54     | 450x500-1272 | 335                              | 23  | 8.0x9.8      | 203x248 | 3 ME                  | 54                       | 54.00                      |
| 9614D              | 18x20-54     | 450x500-1272 | 400                              | 28  | 8.0x9.8      | 203x248 | 3 ME                  | 54                       | 54.00                      |
| 9825D              | 18x20-54     | 450x500-1272 | 400                              | 28  | 8.0x9.8      | 203x248 | 3 ME                  | 54                       | 45.00                      |
| 9829D              | 18x20-54     | 450x500-1272 | 400                              | 28  | 8.0x9.8      | 203x248 | 3 ME                  | 54                       | 49.00                      |
| 9510D              | 20x20-46     | 500x500-1170 | 400                              | 28  | 8.4x8.8      | 213x225 | 3 ME                  | 45                       | 64.06                      |
| 9821D              | 20x20-46     | 500x500-1170 | 470                              | 32  | 7.88x8.0     | 200x203 | 3 ME                  | 45                       | 43.75                      |
| 9811D              | 20x20-46     | 500x500-1170 | 600                              | 41  | 8.4x8.8      | 213x225 | 3 ME                  | 45                       | 46.00                      |
| 9828D              | 20x20-50     | 500x500-1270 | 333                              | 23  | 8.5x8.9      | 216x225 | 3 ME                  | 49                       | 46.00                      |
| 9511D              | 26x28-64     | 660x700-1625 | 450                              | 31  | 9.2x10.9     | 234x275 | 5 ME                  | 64.06                    | 54.00                      |
| 9843D              | 26x28-64     | 660x700-1625 | 450                              | 31  | 13.5x13.5    | 343x343 | 3 ME                  | 67                       | 54.00                      |



GIW INDUSTRIES, INC. 5000 Wrightsboro Rd > Grovetown, Georgia 30813-2842 USA Telephone (+1) 706-863-1011 > Fax (+1) 706-860-5897 WWW.GIWINDUSTRIES.COM

A KSB Company – KSB **b** 

